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10/034,368	12/19/2001	Douglas Alan Gourlay	CISCP199/3486	8709

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EXAMINER
JOO, JOSHUA

ART UNIT	PAPER NUMBER
2154	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/034,368	GOURLAY ET AL.
	Examiner	Art Unit	
	Joshua Joo	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2001*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-41* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/19/2001*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

1.   Claims 1-41 are presented for examination.

2.   Claims 1-41 are rejected.

Information Disclosure Statement

3.   The information disclosure statement (IDS) submitted 12/19/2001 is in compliance with

the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being

considered by the examiner.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed
> publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5.   Claims 1, 2, 4-19, 22-25 are rejected under 35 U.S.C. 102(a) as being unpatentable by

Rune, US Patent #6,304,913.

6.   As per claims 1, 6, 7, and 8, Rune teaches a method and an Internet system for DNS

translation, where the client is provided with a plurality of servers and directed to the server with

the most optimal path. Rune's invention comprises of:

        a)   A processor (Col 7, 20-25. Router (Inherent));

        b)   A memory, at least one of the processor and the memory being adapted for (Col

7, 20-25. Router (Inherent)):

        c)   Receiving a service request (Col 7, lines 9-13. Receives a service request.);

d)   Sending a plurality of packets in response to receiving the service request, each

of the plurality of packets identifying a different type of service via which to send the

corresponding packet (Col 7, lines 20-25. DNS server receives a plurality of packets, each

identifying a different service.); and

e)   Maintaining a mapping of each different type of service to an IP address, thereby

enabling the service request to be processed via an IP address associated with a type of

service identified in a first one of the plurality of packets to be received (Col 4, lines 17-22. DNS

server maintains a mapping of the host name and IP addresses.).

7.   As per claims 9, 23, 24, and 25, Rune teaches a method and an Internet system for DNS

translation, where the client is provided with a plurality of servers and directed to the server with

the most optimal path. Rune's invention comprises of:

a)   Receiving a DNS request indicating a domain name for which an IP address is

requested (Col 7, lines 9-10. DNS server receives a DNS translation request.); and

b)   Transmitting a plurality of DNS responses, each of the plurality of DNS

responses being transmitted via a different path associated with a different type of service (Col

7, lines 20-25. DNS server receives a plurality of packets, each identifying a different service

from different regions of the network.).

8.   As per claim 2, Rune teaches the method as recited in claim 1, wherein the service

request is a TCP connection request or a DNS request (Col 7, lines 9-10. DNS request.)

9.   As per claim 4, Rune teaches the method as recited in claim 1, wherein the type of

service indicates a specific network connection or domain (Col 3, lines 53-55. Regional

networks or the international networks.).

10.   As per claim 5, Rune teaches the method as recited in claim 1, wherein maintaining the

mapping comprises maintaining a plurality of A-records, each of the A-records having a type of

service field adapted for indicating a type of service and wherein receiving the request

comprises receiving a DNS A-record request (Col 4, lines 17-22; Col 4, lines 46-47; Col 7, lines

8-11; Col 7, lines 18-20. Receives a request for DNS translation. DNS server maintains a

mapping of the host name and IP addresses. Each IP address for the plurality of servers

contains hop counts to the servers.).

11.   As per claim 10, Rune teaches the method as recited in claim 9, wherein the type of

service indicates a service or service provider (Col 3, lines 25-32. Type of service maybe based

on service such as lowest hop count to the server.).

12.   As per claim 11, Rune teaches the method as recited in claim 9, wherein each of the

plurality of DNS responses includes a different one of a plurality of IP addresses, each of the

plurality of IP addresses being mapped to a different type of service. (Col 7, lines 6-25. Plurality

of responses includes the different IP addresses of the servers, where each response identifies

a server located on different regions of the network.).

13.   As per claim 12, Rune teaches the method as recited in claim 9, wherein each of the

plurality of DNS response has the same source and destination address (Col 7, lines 10-25.

Each of the DNS responses are sent from the router to the DNS server.).

14.   As per claim 13, Rune teaches the method as recited in claim 9, further comprising:

Providing a service identifier in each of the plurality of DNS responses, the service identifier

identifying a service, type of service, or service provider that is to be used to route the

corresponding DNS response (Col 7, lines 18-20. DNS responses contain the hop counts

associated with the IP addresses of the different servers.).

15.   As per claim 14, Rune teaches the method as recited in claim 9, wherein each of the

plurality of DNS responses comprises a type of service field adapted for indicating a type of

service to be used during next-hop based routing based on the type of service (Col 7, lines 18-

20; Col 4, lines 17-21. DNS responses contain the hop counts for the IP addresses, where the

hop counts are located in the IP header, where the responses are routed from different

networks.).

16.   As per claim 15, Rune teaches the method as recited in claim 9, wherein receiving a

DNS request comprises receiving a DNS A-record request and wherein transmitting a plurality

of DNS responses comprises transmitting a plurality of A-records (Col 6, lines 4-6. Server

receives a DNS request and transmits a plurality of IP addresses associated with the host

name.).

17.   As per claim 16, Rune teaches the method as recited in claim 15, wherein each of the

plurality of A-records includes different IP addresses that is mapped to a type of service, service

or service provider (Col 4, lines 17-21; Figure 1B. DNS server maintains a plurality of different

IP addresses associated with the host name. The IP addresses are of servers located in

different regions of the Internet such as in different networks.).

18.   As per claim 17, Rune teaches the method as recited in claim 16, wherein each of the

plurality of A-records further includes a field adapted for identifying the type of service, service,

or service provider (Col 4, lines 44-46. DNS responses include a plurality of IP addresses and

the hop counts for the plurality of IP addresses in the header.).

19.   As per claim 18, Rune teaches the method as recited in claim 17, further comprising:

Maintaining a table of A-records that includes the plurality of A-records (Col 5, lines 19-26. DNS

servers maintain a plurality of A-records.).

20.   As per claim 19, Rune teaches the method as recited in claim 9, wherein transmitting a

plurality of DNS responses comprises transmitting the plurality of DNS responses to a client

DNS server associated with a client initiating the DNS request (Col 7, lines 9-10; 20-25. Client

submits a DNS translation request. Router transmits a plurality of DNS responses to the DNS

server. The DNS server transmits an IP address to the requesting client.).

21.   As per claim 22, Rune teaches the method as recited in claim 9, wherein transmitting the

plurality of DNS responses comprises transmitting the plurality of DNS responses via one or

more intermediate routers configured to perform next-hop policy based on the type of service

(Col 7, lines 6-25. Router transmits a plurality of responses, where each response identifies a server located on different regions of the network. Router performs hop count on the different servers, located on different regions of the network.).

Claim Rejections - 35 USC § 103

22.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

23.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rune, US Patent #6,304,913 and in view of Zisapel et al, US Patent #6,665,702 (Zisapel hereinafter).

24.   As per claim 3, Rune teaches the method, wherein the type of service indicates regional networks and international networks (Col 3, lines 53-55).

25.   Rune does not specifically teach the method, wherein the type of service indicates a service provider.

26.   Zisapel teaches an invention for providing a plurality of routes from a computer requesting DNS translation to a server, where a plurality of ISPs are available to route the connection (Col 15, lines 45-46; Col 17, lines 6-16).

27.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Rune and Zisapel because both inventions deal with providing the optimum service to a client by basing the service on proximity. Furthermore, the

teachings of Rune to provide a plurality of service providers would improve Rune's invention

because having a plurality of service providers would increase the reliability of Rune's invention

by ensuring a connection is maintained even if the best proximity ISP is unavailable. In such an

event, the connection is routed to another ISP, thus maintaining connection.

28.   Claims 20-21, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Rune, US Patent #6,304,913, and in view of Bohannon, US Publication #2002/0112036

(Bohannon hereinafter).

29.   As per claim 20, Rune teaches that the DNS server is configured to receive from the

router a plurality of DNS responses and the hop counts of the responses. The DNS server

identifies one of a plurality of DNS responses from the router and responds to the client with an

IP address based on the smallest hop count (Col 7, lines 20-25).

30.   Rune does not specifically teach the method as recited in claim 19, wherein the client

DNS server is configured to identify a first one of the plurality of DNS responses to be received

from the network device and to respond to the client with an IP address of the type of·service

identified in the first one of the plurality of DNS responses.

31.   Bohannon teaches of an invention for providing the optimum service to a client, where a

first one of a plurality of responses received by the client is selected for service (Page 6,

Paragraph 0130).

32.   It would have been obvious to one of ordinary skill in the art at the time the invention was

made to combine the teachings of Bohannon and Rune because both inventions deal DNS

translation and providing the fastest service to the client. Rune's invention is to provide the

fastest service to the client, thus the router performs a hop count to detect the closest server to the client. As taught by Bohannon, it would also be desirable for Rune's invention to identify the first of the plurality of responses because it indicates that the response is the optimum, thus it would improve Rune's invention by making the invention more efficient.

33. As per claim 21, Rune and Bohannon taught the method as recited in claim 20. Rune further teaches wherein the client DNS server is further configured to obtain the type of service from the first one of the plurality of DNS responses and obtain an IP address corresponding to the type of service from a mapping table (Col 4, lines 17-21; Col 7, lines 20-25. DNS server maintains a mapping of the host name and the IP addresses. DNS server obtains the hop counts of the plurality of IP addresses.).

34. As per claim 26, Rune teaches a method and an Internet system for DNS translation, where clients are provided with a plurality of servers and directed to the server with the most optimal path. Rune's invention comprises of:

a) A network device adapted for receiving a DNS request indicating a domain name for which an IP address is requested and transmitting a plurality of DNS responses, each of the plurality of DNS responses being transmitted via a different path associated with a different type of service (Col 7, lines 6-25. Router receives DNS request and transmits a plurality of responses, where each response identifies a server located on different regions of the network.);

b)   One or more intermediate routers configured to perform next-hop policy based routing based on the type of services (Col 7, lines 18-20. Router performs hop count on the different server, where the servers are located in different regions of the network.); and

c)   A client DNS server associated with a client initiating the DNS request, the client DNS server being configured to identify one of the plurality of DNS responses to be received from the network device and to respond to the client with an IP address of the type of service identified in the first one of the plurality of DNS responses (Col 7, lines 7-25. Client initiates a translation request. DNS server receives a plurality of the DNS responses from the router, including hop counts of a plurality of IP addresses and identifies the service with the smallest hop count.).

35.   Rune does not specifically teach the client DNS server being configured to identify a first one of the plurality of DNS responses to be received from the network device and to respond to the client with an IP address of the type of service identified in the first one of the plurality of DNS responses.

36.   Bohannon teaches of an invention for providing the optimum service to a client, where first response received by the client is selected for the service (Page 6, Paragraph 0130).

37.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bohannon and Rune because both inventions deal DNS translation and providing the fastest service to the client. Rune's invention is to provide the fastest service to the client, thus the router performs a hop count to detect the closest server to the client. As taught by Bohannon, it would also be desirable for Rune's invention to identify the

first of the plurality of responses because it indicates that the response is the optimum, thus it

would improve Rune's invention by making the invention more efficient.

38.   Claims 27, 28, 30-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Rune, US Patent #6,304,913 and in view of Alkhatib, US Patent #6,430,623, and Bohannon, US

Publication #2002/0112036.

39.   As per claims 27, 39-41, Rune teaches a method and an Internet system for DNS

translation and establishment of a connection using TCP, where the client is provided with a

plurality of servers and directed to the server with the most optimal path (Col 8, lines 33-34).

Rune's invention comprises of:

    a)   A processor (Col 7, 20-25. Router (Inherent));

    b)   A memory, at least one of the processor and the memory being adapted for (Col

7, 20-25. Router (Inherent)):

    c)   Receiving a service request from a client (Col 7, lines 9-13. Receives a service

request.);

    d)   Sending a plurality of packets to the client via plurality of different paths, each of

the plurality of paths corresponding to a type of service (Col 7, lines 18-25. DNS server

receives a plurality of packets, each identifying a different service.); and

    e)   Ascertaining the type of service via which packet received by the client was

transmitted (Col 7, lines 20-25; Col 8, lines 33-34. Client selects the closest alternative server

based on the smallest hop count. Packet contains the IP address of the selected server.); and

40.   Rune does not specifically teach of:

a)   Receiving a TCP connection request from a client;

b)   Sending a plurality of TCP acknowledgement packets.

c)   Receiving acknowledgement messages indicating receipt of acknowledgment of

packets. Transmitting;

d)   Ascertaining the type of service via which TCP acknowledgement packet

received was transmitted.

41.   Alkhatib teaches an invention for domain name routing, using the TCP protocol, where a

TCP connection request is send by a client and acknowledgement packets are transferred

between the sender and receiver to establish a connection, wherein the acknowledgement

packets comprises of the source address and the connection identifier (Col 8, lines 48-53; Col 9,

lines 2-6).

42.   It would have been obvious to one of ordinary skill in the art at the time the invention was

made to modify the teachings of Rune to include the teachings of Alkhatib regarding the TCP

protocol because both inventions deal with domain name routing and the use of the TCP

Protocol as the network model to establish network connections. Furthermore, the teachings of

Alkhatib to send a TCP connection request and the transferring of acknowledgement messages

improves the invention of Rune by specifically teaching how the TCP protocol operates in DNS

routing, and doing so provides a reliable end-to-end network connection.

43.   Rune does not teach of providing an HTTP redirect to an IP corresponding to the type of

service.

44.   Bohannon teaches of providing HTTP redirect to the type of service (Page, 6, Paragraph 129; 130; 0133).

45.   It would have been obvious to one of ordinary skill in the art at the time invention was made to combine the teachings of Bohannon and Rune because both inventions deal with DNS translation and providing the fastest service to the client. Rune's invention is to provide the fastest service to the client, thus it would be desirable to provide a HTTP redirect in Rune's invention because it would improve the efficiency of Rune's invention by routing information to the optimal server.

46.   As per claim 28, Rune teaches the method as recited in claim 27, wherein the type of service indicates a service or service provider (Col 3, lines 25-32. Type of service is based on plurality of paths to the servers, where the plurality of paths consists of different hop count.).

47.   As per claim 30, Rune teaches of a plurality responses comprising of hop counts and the IP addresses of the plurality of servers (Col 7, lines 18-20).

48.   Rune does not specifically teach the method, wherein each of the plurality of TCP acknowledgement packets comprises a type of service field adapted for indicating a type of service, service, or service provider.

49.   Alkhatib teaches of TCP acknowledgement packets that comprise of the connection identifier and the address of the source (Col 8, lines 52-54; Col 9, lines 16-20.).

50.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Rune to include the teachings of Alkhatib regarding the TCP

protocol because both inventions deal with domain name routing and the use of the TCP

Protocol as the network model. Furthermore, the teachings of Alkhatib to have TCP

acknowledgement packets that comprise of the connection identifier and the address of the

source improves the invention of Rune by specifically teaching of how the TCP protocol

operates in DNS routing and doing so provides a reliable end-to-end network connection.

51.   As per claim 31, Rune teaches of responses comprising of IP addresses of the plurality

of servers and the hop counts to the servers (Col 7, lines 18-20).

52.   Rune does not specifically teach the method, wherein each of the plurality of TCP

acknowledgement packets comprises a type of service field adapted for indicating a type of

service to be used during next-hop based routing based on the type of service.

53.   Alkhatib teaches of TCP acknowledgement packets that comprise of the connection

identifier, the address of the source, and an option field (Col 8, lines 52-67; Col 9, lines 16-20.)

54.   It would have been obvious to one of ordinary skill in the art at the time the invention was

made to modify the teachings of Rune to include the teachings of Alkhatib regarding the TCP

protocol because both inventions deal with domain name routing and the use of the TCP

Protocol as the network model. Furthermore, the teachings of Alkhatib to have TCP

acknowledgement packets that comprise of the connection identifier and the address of the

source improves the invention of Rune by providing specific teachings of how the TCP protocol

operates in DNS routing, and doing so provides a reliable end-to-end network connection.

55.   As per claim 32, Rune does not specifically teach the method, wherein each of the

plurality of TCP acknowledgement packets includes a sequence number field, the method

further comprising: Providing a sequence number in the sequence number field indicating an order in which the plurality of TCP acknowledgement packets are sent.

56.   Alkhatib teaches an invention for domain name routing, using the TCP protocol, where the acknowledgement packets transmitted between the clients and servers contain sequence number fields for the tracking of the sequence of the segments exchanged between the sender and receiver (Col 9, lines 1-9).

57.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Rune to include the teachings of Alkhatib regarding the TCP protocol because both inventions deal with domain name routing and the use of the TCP Protocol as the network model. The teachings of Alkhatib to provide a sequence number in the sequence number field indicating an order in which the plurality of TCP acknowledgement packets are sent improves the invention of Rune by providing specific teachings of how the TCP protocol operates, and the use of sequencing packets ensures the proper transmission of data packets between the client and server. Doing so provides a reliable end-to-end network connection.

58.   As per claim 33, Rune does not specifically teach the method as recited in claim 32, wherein receiving an acknowledgement message from the client that indicates receipt of one of the plurality of TCP acknowledgement packets sent by the network device comprises: Receiving an acknowledgement message from the client including the sequence number of a first of the plurality of TCP acknowledgement packets received by the client.

59.   Alkhatib teaches an invention for domain name routing, using the TCP protocol, where the acknowledgement packets send between the clients and servers contain sequence number

fields for the tracking of the sequence of the segments exchanged between the sender and receiver (Col 9, lines 1-9).

60.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Rune to include the teachings of Alkhatib regarding the TCP protocol because both inventions deal with domain name routing and the use of the TCP Protocol as the network model. Furthermore, the teachings of Alkhatib to receive an acknowledgement message from the client including the sequence number of a first of the plurality of TCP acknowledgement packets received by the client improves the invention of Rune by providing specific teachings of how the TCP protocol operates and including the sequence number ensures the proper transmission of data packets between the client and the server. Using the TCP protocol provides a reliable end-to-end network connection.

61.   As per claim 34, Rune does not teach the method as recited in claim 33, wherein each of the plurality of TCP acknowledgement packets further comprises: A type of service field adapted for indicating a type of service, service, or service provider via which the corresponding acknowledgement packet is to be transmitted.

62.   Alkhatib teaches an invention for domain name routing, using the TCP protocol, where the acknowledgement packets send between the clients and servers contain a connection identifier and the IP address of the source (Col 8, lines 53-55; Col 9, lines 1-9; Col 9, lines 17-20).

63.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Rune to include the teachings of Alkhatib regarding the TCP protocol because both inventions deal with domain name routing and the use of the TCP

Protocol as the network model. Furthermore, the teachings of Alkhatib to provide a type of

service field adapted for indicating a type of service, service, or service provider via which the

corresponding acknowledgement packet is to be transmitted improves the invention of Rune by

providing specific teachings of how the TCP protocol operates, and using the TCP protocol

provides a reliable end-to-end network connection.

64.   As per claim 35, Rune does not teach the method as recited in claim 34, further

comprising: obtaining the sequence number from the acknowledgement message received from

the client; determining a type of service associated with the sequence number; and ascertaining

an IP address corresponding to the type of service.

65.   Alkhatib teaches an invention for domain name routing, using the TCP protocol, where

the acknowledgement packets send between the clients and servers contain a sequence

number field, a connection identifier, and the IP addresses of both the source and destination

(Col 8, lines 53-55; Col 9, lines 1-20).

66.   It would have been obvious to one of ordinary skill in the art at the time the invention was

made to modify the teachings of Rune to include the teachings of Alkhatib regarding the TCP

protocol because both inventions deal with domain name routing and the use of the TCP

Protocol as the network model. Furthermore, the teachings of Alkhatib to obtain the sequence

number from the acknowledgement message received from the client, determine a type of

service associated with the sequence number, and ascertain an IP address corresponding to

the type of service improves the invention of Rune by providing specific teachings of how the

TCP protocol operates, and using the TCP protocol provides a reliable end-to-end network

connection.

67.   As per claim 36, Rune teaches the method as recited in claim 35, wherein ascertaining

an IP address corresponding to the type of service comprises: Performing a look up in a

mapping table, the mapping table including a plurality of IP addresses, each of the plurality of IP

addresses corresponding to a different type of service (Col 4, lines 17-21. DNS servers

includes a lookup table for storing the host names and the IP addresses of the servers.).

68.   It would have been obvious to one of ordinary skill in the art at the time the invention was

made to combine the teachings of Rune and Alkhatib to include a mapping of the IP addresses

to the different services because it improves the capability of the invention by allowing the DNS

server to select the optimum server of a plurality of servers for the requesting client.

69.   As per claim 37, Rune does not teach the method as recited in claim 32, wherein each of

the plurality of TCP acknowledgement packets further comprises: A type of service field

adapted for indicating a type of service, service, or service provider via which the corresponding

acknowledgement packet is to be transmitted.

70.   Alkhatib teaches an invention for domain name routing, using the TCP protocol, where

the acknowledgement packets send between the clients and servers contain a connection

identifier (Col 8, lines 53-55; Col 9, lines 1-9).

71.   It would have been obvious to one of ordinary skill in the art at the time the invention was

made to modify the teachings of Rune to include the teachings of Alkhatib regarding the TCP

protocol because both inventions deal with domain name routing and the use of the TCP

Protocol as the network model. Furthermore, the teachings of Alkhatib to provide a type of

service field adapted for indicating a type of service, service, or service provider via which the

corresponding acknowledgement packet is to be transmitted improves the invention of Rune by providing specific teachings of how the TCP protocol operates, and using the TCP protocol provides a reliable end-to-end network connection.

72.   As per claim 38, Rune and Alkhatib taught the method as recited in claim 32. Rune further teaches wherein each of the plurality of TCP acknowledgement packets further comprises a type of service field adapted for indicating a type of service to be used during next-hop based routing based on the type of service (Col 7, lines 6-25. Router transmits a plurality of responses, where each response identifies a server located on different regions of the network. Router performs hop count on the different services).

73.   Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rune, US Patent #6,304,913, Alkhatib, US Patent #6,430,623, Bohannon, US Publication #2002/0112036, and in view of Brendel, US Patent #6,182,139.

74.   As per claim 29, Rune does not teach the method as recited in claim 27, wherein the TCP connection request comprises a TCP packet having a synchronize flag set and wherein each of the plurality of TCP acknowledgement packets comprise a TCP packet having a synchronize flag set and an acknowledge flag set.

75.   Brendel teaches an invention for client-server TCP connection where when a client requests a connection, a synchronization and acknowledgement packets are sent to the client (Col 7, lines 33-35).

76.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Rune and Brendel to include having a synchronize flag set in the acknowledgement packet because both inventions are using the TCP model as the network layer. Doing so improves Rune's invention by specifically teaching how the TCP protocol operates, and it ensures the proper transmission of data packets by allowing the client and the server to recognize the transmitted data.

Conclusion

77.   A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action.

78.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966 and fax number is 571 273-3966. The examiner can normally be reached on Monday to Thursday 8 to 5:30.

79.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on 571 272-3964.

80.   Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 24, 2005
JJ

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